

The interface module then processes the next data block request from an external device according to the same method. Those skilled in the art will appreciate that once all segments have been written from the storage means to memory by the control module, and their availability is recorded in the interface module's log, the interface module will retrieve all requested segments from memory directly.

The embodiments of the invented system and method, as shown in the figures, have been presented for illustrative purposes only and are not intended to limit the scope of the invention. It will be appreciated by those skilled in the art that certain aspects of the invention may be changed, or steps re-ordered or omitted, without departing from the scope of the invention as a whole.

I claim:

1. A solid state disk system comprising:
 - a non-volatile storage media;
 - a memory module;
 - an interface module for communicating with a computer network;
 - a control module operatively coupled to the non-volatile storage media, the memory module, and the interface module;
 - a load priority queue stored by said control module for maintaining a list of data segment requests received by said interface module;
 - a sequential load map stored by said control module for storing the order in which data segments are copied from said non-volatile storage media to said memory module during start-up of said solid state disk system;

said control module; during start-up of the solid state disk system, copying data segments from said non-volatile storage media to said memory module in the order listed in said sequential load map;

said control module, during start-up of the solid state disk system, checking the load priority queue;

said control module, if data segments are listed in said load priority queue, temporarily stopping said copying of data segments listed in said sequential load map;

said control module copying the data segments listed in the load priority queue from the non-volatile storage media to said memory module;

said control module, after all data segments in said load priority queue have been copied, resuming said copying of data segments listed in said sequential load map.

2. The system of claim 1 wherein said memory module is a RAM module.

3. The system of claim 1, said interface module, upon receiving a read or write request from said computer network, issues a command to said control module to check the load priority queue.

4. The system of claim 3, said control module issuing a notice to said interface module when all data segments listed in the load priority queue have been copied from said non-volatile storage media to said memory module.

5. In a solid state memory system including a non-volatile storage media, a memory module, an interface module for communicating with a computer network, and a control module, a method for copying data segments from the non-volatile storage media to the memory module during system start-up, comprising:

said control module creating a sequential load map identifying the order that segments will be copied from said non-volatile storage media to said memory module;

said control module copying segments will be copied from said non-volatile storage media to said memory module according to said sequential load map;

said control module receiving a request for data segments from said interface module and placing said data segments into a load priority queue;

said control module periodically checking the load priority queue to determine if data segments are stored in said load priority queue, and if segments are stored in said queue, copying said data segments from said non-volatile storage means to said memory module before continuing to copy the data segments listed in said sequential load map.

6. The method of claim 5, further comprising the steps of:

said control module, after copying all segments listed in said load priority queue, issuing a notice to said interface module that the requested data segment is available for access.

7 The method of claim 5, further comprising the steps of:

said interface module receiving a data access request from the computer network and issuing a command to said control module to immediately check the load priority queue.